

THE BRAIN: UNDERSTANDING NEUROBIOLOGY THROUGH THE STUDY OF ADDICTION		
West Virginia Science Content Standards and Objectives – Grades 9 & 10		
Lesson	Standard	Objective
1, 2, 3, 4	SC.9.1.1 SC.10.1.1	Formulate scientific explanations based on the student's observational and experimental evidence, accounting for variability in experimental results.
2, 5	SC.9.1.2 SC.10.1.2	Recognize that science has practical and theoretical limitations.
2, 3, 4	SC.9.1.3 SC.10.1.3	Recognize that science is based on a set of observations in a testable framework that demonstrate basic laws that are consistent.
3, 4	SC.9.1.4 SC.10.1.4	Conclude that science is a blend of creativity, logic and mathematics.
All lessons	SC.9.2.1 SC.10.2.1	Model and exhibit the skills, attitudes and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, ethical practice, fairness, creativity).
3, 4	SC.9.2.2 SC. 10.2.2	Demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review).
3, 4, 5	SC.9.2.3 SC.10.2.3	Apply scientific approaches to seek solutions for personal and societal issues.
2, 3	SC.9.2.4 SC.10.2.4	Properly and safely manipulate equipment, materials, chemicals, organisms and models.
All lessons	SC.9.2.6 SC.10.2.6	Use appropriate technology solutions (e.g., computer, CBL, probe interfaces, software) to measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research; and to present and communicate conclusions.
All lessons	SC.9.2.7 SC.10.2.7	Demonstrate science processes within a problem solving setting (e.g., observing, measuring, calculating, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring, considering alternatives and applying).
1, 2, 3, 4	SC.9.2.8 SC.10.2.8	Design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide investigations; design investigations; identify independent and dependent variables in experimental investigations; manipulate variables to extend experimental activities; use technology and mathematics to improve investigations and communications; formulate and revise scientific explanations and models

		using logic and evidence; recognize alternative explanations; communicate and defend a scientific argument).
1, 2, 3, 4	SC.9.3.2 SC.10.3.2	Apply evidence from models to make predictions about interactions and changes in systems.
3, 4	SC.9.3.3 SC.10.3.3	Measure changes in systems using graphs and equations relating these to rate, scale, patterns, trends and cycles.
1, 2	SC.10.4.3	Compare the variations in cells, tissues and organs of different organisms (e.g., endocrine, nervous, digestion and immune systems).
2, 4	SC.9.4.8	Identify and compare the structure and function of cell, tissues and systems of different organisms.
1	SC.9.5.1	Identify the scientific concepts underlying simple technological innovations.
5	SC.10.5.1	Investigate and analyze the interdependence of science and technology.
1, 5	SC.9.5.2	Cite examples of the interdependence of science and technology (e.g., new technologies have lead to development of new scientific knowledge).
5	SC.9.5.3	Apply scientific skills and technological tools to design a solution that addresses a personal or societal need.
1, 5	SC.9.6.3 SC.10.6.3	Describe the impact of cultural, technological, and economic influences on the evolving nature of scientific thought and knowledge.
5	SC.9.6.5 SC.10.6.5	Engage in decision-making activities and actions to resolve science-technology-society issues.

West Virginia Math Content Standards and Objectives – Algebra I

Lesson	Standard	Objective
3	A1.2.2	Solve multi-step linear equations in one variable and apply skills toward solving practical problems.
3	A12.3	Solve multi-step linear inequalities in one variable, interpret the results on a number line and apply the skills toward solving practical problems.
3	A1.2.4	Solve literal equations for a given variable and apply the skills toward solving practical problems.
3, 4	A1.2.17	Add, subtract, multiply and divide simple rational expressions.

West Virginia Reading and Language Arts Content Standards and Objectives – Grades 9 & 10

Lesson	Standard	Objective
All lessons	RLA.10.1.4	Employ reading strategies necessary for various reading purposes (e.g., literary experience; information; and task performance).
All lessons	RLA.9.1.5	Locate specific information in text (e.g., main and supporting ideas; specific facts; statistics; definition).
All lessons	RLA.10.1.5	Continue to use context clues to establish word meaning (e.g., including words with multiple meanings).
All lessons	RLA.9.1.6	Expand the use of various strategies to establish word meanings (e.g., context clues; affixes; multiple meanings).
1, 2, 4	RLA.9.1.7	Recognize and explain the purpose of illustration within a specific text (e.g., pictures; artwork; graphic organizers such as maps - charts - lists - graphs).
All lessons	RLA.9.1.11 RLA.10.1.7	Form supportable predictions, opinions, inferences and conclusions based upon text and/or implicit ideas.
All lessons	RLA.9.1.12	Expand vocabulary through various literary works.
All lessons	RLA.9.2.1 RLA.10.2.1	Address specific writing purposes (e.g., narrative; expository; descriptive; persuasive) by employing writing strategies.
All lessons	RLA.9.2.6	Use a clear, logical progression of ideas (e.g., spatial order in a descriptive essay, chronological order in a process essay) to develop a composition that is focused and coherent.
All lessons	RLA.9.3.1 RLA.10.3.1	Understand, communicate and follow complex or intricate directions effectively.
All lessons	RLA.9.3.2 RLA.10.3.2	Review appropriate classroom communication skills (e.g., asking and answering questions to foster comprehension and communication in the appropriate tone and at the appropriate time).
All lessons	RLA.9.3.4	Listen to identify the purpose, make predictions, distinguish fact from opinion and construct meaning from discussion, speech or media.
West Virginia Health Content Standards and Objectives – High School		
Lesson	Standard	Objective
5	HE.HS.1.3	Analyze and interpret how public health and social policies, along with government regulations (e.g., local, state, federal, world health organizations), influence health promotion and disease prevention.
4, 5	HE.HS.1.4	Differentiate between the causes of communicable and noncommunicable diseases.
4, 5	HE.HS.1.5	Identify and apply skills to prevent communicable and noncommunicable diseases.

4, 5	HE.HS.2.1	Identify and evaluate resources that provide accurate health information in regard to the National Standards of Health Education.
3, 4, 5	HE.HS.3.3	List examples and explain short and long term impacts of health decisions (e.g., smoking, good diet, wearing seat belts) on the individual, family and community (e.g., lung cancer, heart disease, STDs).
5	HE.HS.4.2	Evaluate how media perspectives of health impact on personal, family and community health.
All lessons	HE.HS.5.3	Demonstrate a variety of communication skills (e.g., verbal, nonverbal, listening, writing, technology, workplace).
3, 4, 5	HE.HS.6.2	Identify and discuss health concerns that require collaborative decision-making (e.g., sexuality, STD transmission/prevention, refusal skills).
3, 4, 5	HE.HS.6.3	Analyze the effects of potentially harmful decisions that impact health and the effect these decisions have on their family, community and self (ATOD use, STD transmission, pregnancy prevention, teen parenting).
3, 4, 5	HE.HS.7.1	Use written, audio and visual communication methods to express health messages (e.g., posters, reports, role playing).
3, 4, 5	HE.HS.7.2	Demonstrate the ability to adapt health messages to characteristics of a particular audience.
4, 5	HE.HS.7.3	Promote the use of personal, family and community resources in health care situations.